

# PSITTACOSIS

## DISEASE REPORTING

### *In Washington*

DOH receives 0 to 4 reports of psittacosis per year. The last psittacosis-associated death occurred in 1989.

### *Purpose of reporting and surveillance*

- To identify sources of transmission (e.g., a pet shop or poultry processing plant) and to prevent further transmission from such sources.
- When the source is a risk for only to a few individuals (e.g., a pet with psittacosis), to inform those individuals how they can reduce their risk of exposure.

### *Reporting requirements*

- Health care providers: notifiable to Local Health Jurisdiction within 3 work days
- Hospitals: notifiable to Local Health Jurisdiction within 3 work days
- Laboratories: no requirements for reporting
- Local health jurisdictions: notifiable to DOH Communicable Disease Epidemiology within 7 days of case investigation completion or summary information required within 21 days. ***If bioterrorism is suspected, case must be immediately reported to DOH: 1-877-539-4344***

## CASE DEFINITION FOR SURVEILLANCE

### *Clinical criteria for diagnosis*

An illness characterized by fever, chills, headache, photophobia, cough, and myalgia.

### *Laboratory criteria for diagnosis*

- Isolation of *Chlamydophila* (formerly known as *Chlamydia*) *psittaci* from respiratory secretions, or
- Fourfold or greater increase in antibody against *C. psittaci* by complement fixation or microimmunofluorescence (MIF) to a reciprocal titer of  $\geq 32$  between paired acute- and convalescent-phase serum specimens, or
- Presence of immunoglobulin M (IgM) antibody against *C. psittaci* by MIF to a reciprocal titer of  $\geq 16$ .

*The serologic findings by CF also may occur as a result of infection with Chlamydia pneumoniae or Chlamydia trachomatis. The MIF might be more specific for infection with C. psittaci, but experience with and availability of this newer test are more limited.*

**Case definition**

- Probable: a clinically compatible case that is epidemiologically linked to a confirmed case or that has supportive serology (e.g., *C. psittaci* titer of  $\geq 32$  in one or more serum specimens obtained after onset of symptoms).
  - Confirmed: a clinically compatible case that is laboratory confirmed.
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**A. DESCRIPTION****1. Identification**

An acute, generalized chlamydial disease with variable clinical presentations; fever, headache, rash, myalgia, chills and upper or lower respiratory tract disease are common. Respiratory symptoms are often disproportionately mild when compared with the extensive pneumonia demonstrable by x-ray. Cough is initially absent or nonproductive; when present, sputum is mucopurulent and scant. Pleuritic chest pain and splenomegaly occur infrequently; the pulse may be slow in relation to temperature. Encephalitis, myocarditis and thrombophlebitis are occasional complications; relapses may occur. Although usually mild or moderate in character, human disease can be severe, especially in untreated elderly persons.

The diagnosis may be suspected in patients with appropriate symptoms who have a history of exposure to birds and elevated or increasing antibodies to chlamydial antigens collected 2-3 weeks apart. Diagnosis is confirmed, under suitably safe laboratory conditions only, by isolation of the infectious agent from sputum, blood or postmortem tissues in mice, eggs or cell culture. Recovery of the agent may be difficult, especially if the patient has received broad-spectrum antibiotics.

**2. Infectious Agent**

*Chlamydophila psittaci*.

**3. Worldwide Occurrence**

Worldwide. May be associated with obviously sick or apparently healthy pet birds. Outbreaks occasionally occur in individual households, pet shops, aviaries, avian exhibits in zoos and pigeon lofts. Most human cases are sporadic; many infections are probably not diagnosed.

**4. Reservoir**

Principally in parakeets, parrots and love birds; less often in poultry, pigeons, canaries and sea birds. Birds that appear to be healthy can be carriers and shed the infectious agent, particularly when subjected to the stresses of crowding and shipping.

**5. Mode of Transmission**

By inhaling the agent from desiccated droppings, secretions and dust from feathers of infected birds. Imported psittacine birds are the most frequent source of exposure, followed by turkey, squab and duck farms; processing and rendering plants have also been sources of occupational disease. Geese and pigeons are occasionally responsible for human disease. Laboratory infections have occurred. Rare person to person transmission has been reported to occur during the acute illness with paroxysmal coughing; however, these cases may have been caused by the recently described *C. pneumoniae* rather than *C. psittaci* organisms.

**6. Incubation period**

From 1 to 4 weeks.

**7. Period of communicability**

Diseased as well as seemingly healthy birds may shed the agent intermittently, and sometimes continuously, for weeks or months.

**8. Susceptibility and resistance**

Susceptibility is general; immunity following infection is incomplete and transitory. Older adults may be more severely affected. There is no evidence that persons with antibodies at any given concentration are protected.

**B. METHODS OF CONTROL****1. Preventive measures:**

- a. Educate the public to the danger of household or occupational exposure to infected pet birds. Medical personnel responsible for occupational health in processing plants should be aware that febrile respiratory illness with headache or myalgia among the employees may be psittacosis.
- b. Regulate the importation of, raising of and trafficking in birds of the parrot family. Prevent or eliminate infections of birds by quarantine and appropriate antibiotic treatment.
- c. Psittacine birds offered in commerce should be raised under psittacosis free conditions and handled in such manner as to prevent infection. Tetracyclines can be effective in controlling disease in psittacines and other companion birds if properly administered to ensure adequate intake for at least 30 days and preferably for 45 days. Treatment failures can occur.
- d. Conduct surveillance of pet shops and aviaries where psittacosis has occurred or where birds epidemiologically linked to cases were obtained, and of farms or processing plants to which human psittacosis was traced epidemiologically. Infected

birds should be treated or destroyed and the area where they were housed thoroughly cleaned and disinfected with a phenolic compound.

## **2. Control of patient, contacts and the immediate environment:**

- a. Report to local health authority.
- b. Isolation: None. Coughing patients should be instructed to cough into paper tissue.
- c. Concurrent disinfection: Of all discharges. Terminal cleaning.
- d. Quarantine: Of infected farms or premises with infected birds until diseased birds have been destroyed or adequately treated with tetracycline and the buildings disinfected.
- e. Immunization of contacts: None.
- f. Investigation of contacts and source of infection: Trace origin of suspected birds. Kill suspected birds and immerse bodies in 2% phenolic or equivalent disinfectant. Place in plastic bag, close securely and ship frozen (on dry ice) to nearest laboratory capable of isolating *Chlamydophila*. If suspected birds cannot be killed, swab-cultures of their cloacae or droppings should be shipped to the laboratory in appropriate transport media and shipping containers in compliance with postal regulations; after the cultures are taken, the birds should be treated with a tetracycline drug.
- g. Specific treatment: Antibiotics of the tetracycline group, given for 10-14 days after temperature returns to normal. Erythromycin is an alternative when tetracycline is contraindicated (pregnancy, children less than 9 years of age).

## **3. Epidemic measures**

While cases are usually sporadic or confined to family outbreaks, epidemics related to infected aviaries or bird suppliers may be extensive. Report outbreaks of psittacosis in turkey and duck flocks to state agriculture and health authorities. Large doses of tetracycline can suppress, but not eliminate, infection in poultry flocks and thus may complicate investigations.

## **4. International measures**

Reciprocal compliance with national regulations to control importation of psittacine birds.